to the subscribers, my friend Desor remembered the trick he had played on his amanuensis. A special card had to be inserted in place of the objectionable passage. The conclusion may easily be drawn—four proof-readers had read the article without consciously taking knowledge of its contents."

I suppose that every author who has published much must have felt disgusted at finding some glaring error in a paper of which he had read the proofs and yet failed to detect. Such failure is not very surprising, however, as attention is concentrated on form and typography. But it is surprising that four men of such learning as Agassiz, Desor, '(G.)' and Vogt should all have passed unnoticed the evident absurdity quoted by Prof. Vogt. Perhaps the fact they did so may reconcile others to their blunders. I offer this balm (which has been of service to me!) for those interested. Yours truly,

THEO. GILL.

WASHINGTON, July 11, 1895.

THE GENERIC NAME ANISONYX PREOCCUPIED.

IN the first number of the new series of SCIENCE (Vol. I., No. 1, Jan. 4, 1895, 18–19) I called attention to the fact that the generic name *Anisonyx* of Rafinesque (1817) antedates *Spermophilus* of Cuvier by eight years, and seemed to be the earliest available name for the ground squirrels. Fortunately, however, *Anisonyx* is preoccupied. In a rare work by Latreille entitled *Genera Crustaceorum et Insectorum*, and published in 1807, the name *Anisonyx* was proposed for a genus of Coleoptera, thus antedating Rafinesque's use of it by ten years.

C. HART MERRIAM.

CORRECTION.

IN the review of the Twenty-third Annual Report of the Geological Survey of Minnesota, etc., in SCIENCE of July 5, p. 23, first column, near top, the Keewatin rocks are referred to the Upper Algonkian, of the U. S. Geological Survey, whereas they should have been referred to the *Lower* division. EUGENE A. SMITH.

SCIENTIFIC LITERATURE.

Les aurores polaires. By ALFRED ANGOT. Paris, Felix Alcan. 1895. Bibliothèque Scientifique Internationale. 230 pages with an appendix catalogue and many illustrations.

The well known meteorologist of the Bureau Central Météorologique takes occasion to say, in the introductory chapter of this book, that the lack of any volume in French dealing exclusively with the aurora, since the time of Bravais, 1839, was a prime consideration in the issue of this volume. Information concerning the aurora had to be sought in stray notes, miscellanies, etc. Our author attempted a partial remedy by contributing in 1882 to 'La lumiére électrique' a series of ten papers giving a general view of our knowledge of the aurora; and the present volume consists practically of these ten papers expanded and brought up to date. Appearing in 1895, some mention of Lemstrom's 'l'Aurore boreale' (1886) and Paulsen's 'Contribution a notre connaissance de l'aurore' (1889) might have appropriately been made; and the omission is the more noticeable in that the former work is referred to in the chapter on the physical character of the aurora.

The illustrations are chiefly reproductions of sketches made by French observers in high latitudes; but it must be confessed that sketches made in 1839, 1870 and 1879 seem a trifle antiquated. No mention is made of the fact that the aurora has been photographed. Tromholt made an attempt as early as 1885 to do this. Very fair photographs considering the conditions were obtained in 1892 by Dr. Martin Brendel and Herr O. Baschin at Bossekop.

The form and appearance of auroras, their physical character, frequency, relation to

the weather, etc., are treated pleasantly in various chapters; but the chief results of the International Circum-polar Stations are hardly alluded to. In the chapter on theories respecting the origin of the aurora no mention can be found of Lockyer's ingenious meteoric theory. The data given respecting the height of the aurora are likewise far from complete; and in the table on page 71, giving wave-lengths of lines found in the auroral spectrum, only 14 lines are given, which doubtless was the full number in 1882, bnt which now contrasts strangely with Gyllenskiold's detailed description of 32 lines.

Lemstrom's experiments upon the artificial reproduction of the aurora do not seem to our author to be all that has been claimed for them; and, after noticing Tromholt's unsuccessful attempt with similar apparatus, he gives the experience of M. Vaussenat at the Pic du Midi, who, at an elevation of 2,877 metres, with a network of wire covering an area of 640 square metres, obtained nothing in the way of an artificial aurora. So, like many another explanation of the aurora, this may be laid away for the present as unproven. The true relation of the aurora to magnetic perturbations still remains to be determined. Angot repeats a suggestion which has been made elsewhere, viz.: that many of the difficulties which now present themselves in connection with auroras and magnetic perturbations will disappear if it be understood that, under the one name of aurora, we are now classifying phenomena which may be of very different natures. Let us make one class of auroras embrace those widely extended magnificent displays which are accompanied with magnetic disturbances, and another class those displays which are local in character and more in the nature of manifestations of atmospheric electricity.

There remains little to be said about the relation of sun-spots and auroras, other than that the agreements thus far made out are, it is to be feared, more apparent than real. We seem, indeed, to be but little removed from the military authorities who, at Copenhagen in 1709, during a very brilliant aurora, ordered that the troops be paraded, the drums beaten and arms presented. We are able to do as little. A. M.

Geological Survey of Michigan. L. L. Hubbard, State Geologist. Vol. v., 1881–1893. Part I. Upper Peninsula, 1881–1884. Iron and Copper Regions, by Carl Rominger, pp. 179, 3 plates and a map. Part II. Geology of Lower Michigan, with reference to deep borings. C. E. Wright and A. C. Lane, with an introduction by L. L. Hubbard, pp. 100, plates LXXIII. and a map. Lansing, 1895.

The Geological Survey of Michigan is to be congratulated on finally possessing, as we learn from this report, a house of its own, where its collections can be permanently stored and kept together for reference. There is so much complexity in the geology of the Upper Peninsula, and so much importance attaches to the determination of obscure species of rocks, that a permanent home is indispensable, and the sole regret is that it was not earlier attained. The volume before us resumes, in the same style, the series of Michigan reports that temporarily ceased with the issue of Vol. IV., in 1882. Part I. consists of a manuscript of Dr. Carl Rominger, formerly State Geologist, that was prepared about 1882, and has remained unpublished to date. To properly appreciate Dr. Rominger's paper on the iron districts one must place one's point of view back in 1883 and efface from mind as far as possible the work of Irving, Van Hise and G. H. Williams, the reports of Wadsworth, the reviews of Alex. Winchell and many other minor papers on the petrography and stratigraphy of this difficult